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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/549,911	09/20/2005	Robert J Briscoe	36-1938	4787
23117 7590 04/29/2008 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203				
EXAMINER				
HUSSAIN, IMAD				
ART UNIT		PAPER NUMBER		
2151				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/549,911

Applicant(s)

BRISCOE ET AL.

Examiner

IMAD HUSSAIN

Art Unit

2151

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2007.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 34-56 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 34-56 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 20 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date 21 September 2007
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

1. The amendment filed on 21 September 2007 has been received and made of record.
2. Claims 1-33 have been cancelled. New claims 34-56 have been added and are pending in application 10/549911.

Election/Restrictions

3. Claims 1-33 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected inventions, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 21 September 2007.

Information Disclosure Statement

4. The information disclosure statement filed 21 September 2007 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Objections

5. Claims 41, 43, 47, 49, 53, and 55 are objected to because of the following informality: the claims recite the limitation "sequence identifier", but the remaining claims refer instead to a "thread identifier". Appropriate correction is required.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 46-56 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

In this case, computer-related inventions whether descriptive or functionally descriptive material are non-statutory categories when claimed as descriptive material per se (see Warmerdam, 33 F.3d at 1360 USPQ2d at 1759), falling under the "process" category (i.e. inventions at that consist of a series of steps or acts to be performed). See 35 U.S.C. 100(b) ("The term process means, art, or method, and includes a new of a known process, machine, manufacture, composition of matter or material").

Functional descriptive material: "data structures" representing descriptive material per se or computer program representing computer listing per se (i.e. software per se) when embodied in a computer-readable media are still not statutory because they are not capable of causing functional change in the computer. However, a claimed computer-readable storage medium encoded with a data structure, computer listing or computer program, having defined structural and functional interrelationships between the data

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structure, computer listing or computer program and the computer software and hardware component, which permit the data structure's, listing or program's functionality to be realized, is statutory (see MPEP 2106).

Claims 46-56 are directed to a "system" comprising only software components and not hardware and are therefore non-statutory as described above.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 34-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tie Liao (*Global Information Broadcast*, hereinafter Liao) in view of Richard C. Zulch (US 5150473, hereinafter Zulch).

Regarding claim 34, Liao teaches *an announcement method for use in a publish-subscribe architecture* [Liao: Page 19 (4) Columns 1-2], *the method comprising:*

compiling an index announcement message based on a plurality of thread identifiers respectively identifying a plurality of announcement threads [Liao: Table 1], *wherein each of the plurality of thread identifiers comprises a first and a second sub-part* [Liao: Page 23 (8) Column 2, a "URL" has a path and a filename], *and transmitting*

the compiled index announcement message onto an index channel [Liao: Page 22 (7)
Column 2 Paragraph 1];

Liao does not explicitly disclose that:

if the second sub-part of any thread identifier to be included within the index announcement message does not match the second sub-part of any other thread identifier to be included within the index announcement message, then including only the second sub-part and not the first sub-part of the thread identifier in the compiled index announcement message, otherwise

if the second sub-part of any thread identifier to be included within the index announcement message does match the second sub-part of any other thread identifier to be included within the index announcement message, then including both the first and second sub-part in the compiled index announcement message.

However, Zulch teaches:

if the second sub-part of any thread identifier to be included within the index announcement message does not match the second sub-part of any other thread identifier to be included within the index announcement message, then including only the second sub-part and not the first sub-part of the thread identifier in the compiled index announcement message [Zulch: Column 4 Line 67-Column 5 Line 4 and Claim 1],
otherwise

if the second sub-part of any thread identifier to be included within the index announcement message does match the second sub-part of any other thread identifier

to be included within the index announcement message, then including both the first and second sub-part in the compiled index announcement message [Zulch: Column 4 Line 67-Column 5 Line 4 and Claim 1].

Liao and Zulch are analogous art in the same field of endeavor as both describe data storage and indexing methods. It would have been obvious for one of ordinary skill in the art at the time the invention was made to utilize the unique identifier partitioning scheme of Zulch for storing only the necessary parts of an identifier in the system of Liao. One of ordinary skill in the art would have been motivated to modify the system of Liao with the unique identifier partitioning scheme of Liao because in doing so, the system would allow for space savings [Zulch: Column 4 Lines 65-67].

Regarding claim 37, the combination of Liao and Zulch teaches that *the first sub-part of a thread identifier is a network address or other network locator* [Liao: Page 23 (8) Column 2].

Regarding claim 38, Liao-Zulch teaches that *the first sub-part is a Universal Resource Locator (URL)* [Liao: Page 23 (8) Column 2].

Regarding claim 39, Liao-Zulch teaches that *the first sub-part is an email address* [Liao: Page 23 (8) Column 2].

Regarding claim 45, the claim comprises the same limitations as claim 34. The same rationale for rejection is applicable.

Regarding claim 46, Liao teaches *an announcement system for use in a publish-subscribe architecture* [Liao: Page 19 (4) Columns 1-2], *the system comprising:*

message compiling means ["publisher"] *arranged in use to compile an index announcement message containing a plurality of thread identifiers respectively identifying a plurality of announcement threads* [Liao: Table 1], *wherein each of the plurality of thread identifiers comprises a first and a second sub-part* [Liao: Page 23 (8) Column 2, a "URL" has a path and a filename];

and means for transmitting [Liao: Figure 2, "GIB framework"] *the compiled index announcement message onto an index channel* [Liao: Page 22 (7) Column 2 Paragraph 1].

Liao does not explicitly disclose that:

wherein if the second sub-part of any thread identifier to be included within the index announcement message does not match the second sub-part of any other thread identifier to be included within the index announcement message, then the compiling means is adapted to include only the second sub-part and not the first sub-part of the thread identifier in the compiled index announcement message, otherwise

if the second sub-part of any thread identifier to be included within the index announcement message does match the second sub-part of any other thread identifier to be included within the index announcement message, then the compiling means is

adapted to include both the first and second sub-part in the compiled index announcement message.

However, Zulch teaches:

Wherein if the second sub-part of any thread identifier to be included within the index announcement message does not match the second sub-part of any other thread identifier to be included within the index announcement message, then the compiling means is adapted to include only the second sub-part and not the first sub-part of the thread identifier in the compiled index announcement message [Zulch: Column 4 Line 67-Column 5 Line 4 and Claim 1], otherwise

if the second sub-part of any thread identifier to be included within the index announcement message does match the second sub-part of any other thread identifier to be included within the index announcement message, then the compiling means is adapted to include both the first and second sub-part in the compiled index announcement message [Zulch: Column 4 Line 67-Column 5 Line 4 and Claim 1].

Liao and Zulch are analogous art in the same field of endeavor as both describe data storage and indexing methods. It would have been obvious for one of ordinary skill in the art at the time the invention was made to utilize the unique identifier partitioning scheme of Zulch for storing only the necessary parts of an identifier in the system of Liao. One of ordinary skill in the art would have been motivated to modify the system of Liao with the unique identifier partitioning scheme of Liao because in doing so, the system would allow for space savings [Zulch: Column 4 Lines 65-67].

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Regarding claim 49, the claim comprises substantially the same limitations as claims 46 and 37.

Regarding claim 50, the claim comprises substantially the same limitations as claims 46 and 38.

Regarding claim 51, the claim comprises substantially the same limitations as claims 46 and 39.

9. Claims 35, 41, 47-48 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liao and Zulch as applied to claims 34 and 46 above in view of Marion D. Skeen et al. (US 5557798, hereinafter Skeen).

Regarding claim 35, the combination of Liao and Zulch does not explicitly disclose *means for requesting the allocation of a sequence identifier from an allocator;*

and means for receiving a message from the allocator containing the requested sequence identifier.

However, Skeen teaches *requesting the allocation of a thread identifier from an allocator* [Skeen: Column 5 Lines 44-47];

and receiving a message from the allocator containing the requested thread identifier [Skeen: Column 5 Lines 44-47].

Liao-Zulch and Skeen are analogous art in the same field of endeavor as both describe publish-subscribe systems. It would have been obvious for one of ordinary skill in the art at the time the invention was made to utilize the sequence number scheme of Skeen for packet identification in the system of Liao-Zulch. One of ordinary skill in the art would have been motivated to modify the system of Liao-Zulch with the sequence number scheme of Skeen because in doing so, the system would allow for verification and uniqueness of messages [Skeen: Column 5 Lines 44-47].

Regarding claim 41, Liao-Zulch-Skeen teaches that *a second sub-part of a sequence identifier is a number* [Skeen: Column 5 Lines 44-47, "sequence number"].

Regarding claim 47, the combination of Liao and Zulch does not explicitly disclose *means for requesting the allocation of a sequence identifier from an allocator;*

and means for receiving a message from the allocator containing the requested sequence identifier.

However, Skeen teaches *means for requesting the allocation of a sequence identifier from an allocator* [Skeen: Column 5 Lines 44-47];

and means for receiving a message from the allocator containing the requested sequence identifier [Skeen: Column 5 Lines 44-47].

Liao-Zulch and Skeen are analogous art in the same field of endeavor as both describe publish-subscribe systems. It would have been obvious for one of ordinary skill in the art at the time the invention was made to utilize the sequence number scheme of

Skeen for packet identification in the system of Liao-Zulch. One of ordinary skill in the art would have been motivated to modify the system of Liao-Zulch with the sequence number scheme of Skeen because in doing so, the system would allow for verification and uniqueness of messages [Skeen: Column 5 Lines 44-47].

Regarding claim 48, the combination of Liao-Zulch and Skeen teaches that *the first sub-part of a thread identifier is a network address or other network locator* [Liao: Page 23 (8) Column 2].

Regarding claim 53, the claim comprises substantially the same limitations as claims 46 and 41.

10. Claims 40 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liao and Zulch as applied to claims 37 and 46 above in view of Jie Weng et al. (US 2003/0174155 A1, hereinafter Weng).

Regarding claim 40, Liao-Zulch does not explicitly disclose that *the first sub-part is an Internet Protocol network address*.

However, Weng teaches that *the first sub-part is an Internet Protocol network address* [Weng: Paragraph 0166].

Liao-Zulch and Weng are analogous art in the same field of endeavor as both describe publish-subscribe architectures. It would have been obvious for one of ordinary

skill in the art at the time the invention was made to utilize the IP address scheme of Weng for using Internet Protocol addresses in the system of Liao-Zulch. One of ordinary skill in the art would have been motivated to modify the system of Liao-Zulch with the IP address scheme of Weng because in doing so, the system would allow for direct IP address, bypassing DNS conversions.

Regarding claim 52, the claim comprises substantially the same limitations as claims 46 and 40.

11. Claims 42, 44, 54 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liao, Zulch and Skeen as applied to claims 35 and 47 above in view of Marc Chomet (US 4645873, hereinafter Chomet).

Regarding claim 42, Liao-Zulch-Skeen does not explicitly disclose that *the number is randomly generated*.

However, Chomet teaches that *the number is randomly generated* [Chomet: Column 3 Lines 12-17].

Liao-Zulch-Skeen and Chomet are analogous art in the same field of endeavor as both describe tokens in telecommunications systems. It would have been obvious for one of ordinary skill in the art at the time the invention was made to utilize the random number scheme of Chomet for random numbers in the system of Liao-Zulch-Skeen. One of ordinary skill in the art would have been motivated to modify the system of Liao-

Zulch-Skeen with the random number scheme of Chomet because in doing so, the system would allow uniqueness of identifiers.

Regarding claim 44, the combination of Liao-Zulch-Skeen and Chomet teaches that *for a given first sub-part, if the number generated for the second sub-part has previously been generated, then repeating the random generation* [Chomet: Column 3 Lines 12-17].

Regarding claim 54, the claim comprises substantially the same limitations as claims 46 and 42.

Regarding claim 56, the claim comprises substantially the same limitations as claims 46 and 44.

12. Claims 43 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liao, Zulch, Skeen and Chomet as applied to claims 41 and 46 above in view of Lynn Henry Wheeler et al. (US 20030177361 A1).

Regarding claim 43, Liao-Zulch-Skeen-Chomet does not explicitly disclose that *the number is produced by applying a hash function to data defining the subject matter of the sequence of messages*.

However, Wheeler teaches that *the number is produced by applying a hash function to data defining the subject matter of the sequence of messages* [Wheeler: paragraph 0010].

Liao-Zulch-Skeen-Chomet and Wheeler are analogous art in the same field of endeavor as both describe electronic messaging systems. It would have been obvious for one of ordinary skill in the art at the time the invention was made to utilize the hashing scheme of Wheeler for generating a hash from message subjects in the system of Liao-Zulch-Skeen-Chomet. One of ordinary skill in the art would have been motivated to modify the system of Liao-Zulch-Skeen-Chomet with the hashing scheme of Wheeler because in doing so, the system would allow for checking the validity of messages [Wheeler: Paragraph 0010].

Regarding claim 55, the claim comprises substantially the same limitations as claims 46 and 43.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to IMAD HUSSAIN whose telephone number is (571) 270-3628. The examiner can normally be reached on Monday through Friday from 0800 to 1700.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571) 272-3964. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/IH/

Imad Hussain

Examiner

/John Follansbee/

Supervisory Patent Examiner, Art Unit 2151